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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/699,687

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Stephen Kaminski

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EXAMINER

LA, NICHOLAS T

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,687

Applicant(s)

KAMINSKI ET AL.

Examiner

Nicholas T. La

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Arguments

Applicant's arguments filed 07/19/2006 have been fully considered but they are not persuasive.

Applicant argues that Wood does not disclose or suggest "selecting a sun-set of air interfaces from a set of air interfaces, the sub-set containing air interfaces, which support the required quality of service parameter set". The examiner respectfully disagrees. Wood teaches selecting an air interface from a list of air interfaces; since there is no quantity requirement for a sub-set set forth in the claim language, therefore, it is to interpret sub-set of interfaces in this case is one interface (col. 2, line 37 to 39); controller 45 selects an air interface, the sub-set containing air interfaces, which support the required quality of service parameter set (col. 3, line 7 to 24, wherein air interfaces selection is impacted because different rates are charged for different interfaces based on quality of service). Wood further teaches another entity RAN (Figure 4; base 44; col. 2, line 29-31) is informed about the controller 45 selection of the sub-set of interfaces (col. 2, line 39-40) and base 44 will select an air interface which is available by accepting the sub-set of air interfaces suggested by controller 45 for the call connection (col. 2, line 37 to 68) in accordance to the required quality of service parameter.

Regarding claim 5 and 6, the applicant argues that Kallio does not disclose or suggest selecting UMTS air interface with the format of HSDPA, and the alternative interface being WLAN with WLAN format. The examiner disagrees. As previously mentioned in the last office action, Kallio teaches solutions for providing seamless mobility between GSM and different networks including 3G WCDMA and WLAN networks (paragraph [0008], [0023]); each networks has its own compatible format data frame and air interface format (paragraph [0023]-[0024], [0032], [0043]). It is also well known in the art that High Speed Down Link Packet Access (HSDPA) for Universal Mobile Telecommunications System (UMTS) for 3G WCDMA network both Time Division Duplex (TDD) and Frequency Division Duplex (FDD) has been proposed to provide very high data packet service. It is also noted that even though Kallio does not expressly teach selected air interface being an UTMS air interface, the first air interface format being HSDPA (3G WCDMA), the alternative air interface being WLAN and the second air interface format being WLAN frames (WLAN), Kallio teaches both networks and selected air interface being an GSM air interface, the first air interface format being in GSM format, the alternative air interface being WLAN and the second air interface format being WLAN frames (WLAN). It would have been obvious to one ordinary skill in the art at the time of the invention was made to make such a design choice or flexibility to include selected air interface being an UTMS air interface, the first air interface format being HSDPA (3G WCDMA), the alternative air interface being WLAN and the second air interface format being WLAN frames (WLAN) in order to use or implement it in such

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as different location, region, or country based on the actual desire for the location, region, or country.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

New claims 11, 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new limitation “storing said set of air interfaces by the radio network controller” and “storing, by the node, medium access control components corresponding to respective air interfaces at the node” are not disclosed or being clearly discussed in the disclosure. Corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) Claims 1-4, 7-10, 11-13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US Patent No. 5,412,375) and further in view of Hsu et al. (US Patent No. 6,169,898).

Regarding **claim 1**, Wood teaches a telecommunication method comprising the steps of:

selecting a sub-set of air interfaces from a set of air interfaces, the sub-set containing air interfaces (Col. 2, line 37 to 53) ,

providing the sub-set to a node of a radio access network having the set of air interfaces (Col. 2, line 37 to 53),

selecting an air interface from the sub-set by the node (Col. 2, line 54 to 57).

However, Wood does not explicitly teach a method comprising receiving of a required quality of service parameter set from the core network by a radio network controller as well as for the purpose of providing the required quality of service to the user equipment. In an analogous art, Hsu et al. teaches apparatus, and associated method, for maintaining a selected quality of service level in a radio communication system. Hsu et al. further specifically teaches a method of receiving of a required quality of service parameter set from a core network by a radio network controller and to maintain the level quality of service respectively (Figure 1 shows structure of the system, which includes a core net work comprising a HLR 28 and MSC 24 and theirs associated elements, radio network controller 22 and its associated elements; Col. 4,

line 65 to Col. 5, line 10; Col. 6, line 7 to line 39). Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Wood method of selecting air interface to include the requirement of maintaining the level of quality of service such as taught by Hsu et al. in order to have resources better allocated at respective node to give better service.

Regarding **claim 2**, Wood further teaches a method further comprising receiving of a monitoring list by the radio network controller, the monitoring list containing the set of air interfaces by means of which the node can actually establish a telecommunication link with the user equipment (Figure 4, Col. 2, line 26 to 36; Col. 3, line 44 to 50).

Regarding **claim 3**, Wood further teaches a method further comprising the steps of:

receiving of data being indicative of at least one of the air interfaces of the set of air interfaces, the at least one interface having no more free data transmission capacity (Col. 2, line 37 to 68 as the resources for the selected air interface may have been assigned for another call),

eliminating the at least one air interface from the sub-set (Figure 1, step 17 to 24; Col. 2, line 37 to 68 eliminating as rejecting of selected air interface).

Regarding **claim 4**, Wood further teaches a method, whereby the selection of the air interface is performed by the node based on load balancing and/or actual availability

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of the air interfaces (Col. 2, line 37 to 68; Col. 3, line 44 to 50; base 44 selects the selected air interface from the list of compatible interfaces and if there are resources of the air interface is available, otherwise rejected and notify the controller).

Regarding **claim 7**, claim 7 is a computer-readable medium comprising instructions necessary to implement the method of claim 1. Therefore, claim 7 is rejected for the same reason.

Regarding **claim 8**, claim 8 is an apparatus claim for a radio network controller of a radio access network necessary to implement the method of claim 1. Therefore, claim 8 is rejected for the same reason as claim 1.

Regarding **claim 9**, claim 9 is an apparatus claim for a node of a radio access network necessary to implement the method of claim 1. Therefore, claim 8 is rejected for the same reason as claim 1.

Regarding **claim 10**, claim 10 is a system claim for the method of claim 1. Therefore, claim 10 is rejected for the same reason.

Regarding **claim 11**, Wood further teaches a telecommunication method further comprising:

storing said set of air interfaces by the radio network controller (col. 3, line 25 to 33)

selecting by the radio network controller the sub-set of air interfaces from said set of air interfaces by referencing a list comprising air interfaces and corresponding quality of service parameters, wherein the list is stored in the radio network controller (col. 2, line 26 to 53; col. 3, line 7 to 33); and

providing by the radio network controller to the node the selected sub-set of air interfaces (col. 2, line 26 to 53).

Regarding **claim 12**, Wood further teaches a telecommunication method, further comprising storing, by the node medium access control component corresponding to respective air interfaces available at the node, wherein said node selects the air interface and maps the selected air interface to a corresponding medium access control component (col. 2, line 37 to col. 3, line 6).

Regarding **claims 13, 15**, Wood further teaches in another embodiment, wherein the sub-set of air interfaces comprises a list of compatible interfaces to base 44 (col. 3, line 34 to 59) further teaches a telecommunication method further comprising changing by the node the selected air interface to another air interface, wherein said another air interface selected by the node from the provided sub-set of air interfaces without communicating with radio network controller (col. 3, line 34 to 59). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made

to modify Wood first embodiment and Hsu et al. to include Wood teaching in the second embodiment of the sub-set of air interfaces comprises a list of compatible interfaces to base 44 and further teaches a telecommunication method further comprising changing by the node the selected air interface to another air interface, wherein said another air interface selected by the node from the provided sub-set of air interfaces without communicating with radio network controller in order to select an air interface with takes into account the capabilities of the subscriber and the particular system side transceiver with which it desires to communicate.

3) Claims 5-6, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood (US Patent No. 5,412,375) in view of Hsu et al. (US Patent No. 6,169,898) and further in view of Kallio (US Pub. No. 2002/0147008).

Regarding **claim 5**, Wood and Hsu et al. teach a telecommunication method to select a subset of air interfaces to provide a required quality of service to user equipment. However, Wood and Hsu et al. does not teach a method further comprising the steps of:

establishing a first telecommunication link by means of the selected one of the set of air interfaces and sending of data frames having a first data frame format of the selected air interface,

mapping of the first data frame format to a second data frame format of an alternative one of the set of air interfaces,

replacing of the selected air interface by the alternative interface and sending of the mapped data frames having the second air interface format via a second telecommunication link which has been established by means of the alternative air interface.

In an analogous art, Kallio teaches a GSM networks and solutions for providing seamless mobility between GSM networks and different radio networks. Kallio further teaches a method of having ongoing call via GSM cell using call protocol used for GSM network (paragraph [0032], [0043]), mapping the call protocols that used for GSM network and WLAN network (paragraph [0043]), and releasing the reserved resources the support GSM air interface for a replacing WLAN using a call protocol used for WLAN and "starts to used the WLAN radio" (paragraph [0050]). Therefore, it would have been obvious to one ordinary skilled in the art at the time of the invention was made to modify Wood and Hsu method to include the method of providing seamless mobility between a GSM network to WLAN network such as taught by Kallio where area high quality of service is desirable.

Regarding **claim 6**, Wood, Hsu et al., and Kallio do not explicitly teach selected air interface being an UMTS air interface, the first air interface format being HSDPA, the alternative air interface being WLAN and the second air interface format being WLAN frames. However, Kallio teaches selected air interface being an GSM air interface, the first air interface format being call protocol supported by GSM, the alternative air interface being WLAN and the second air interface format being call protocol supported

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by WLAN. Therefore, it would have been obvious to one ordinary skilled in the art at the time of the invention to enhance flexibility by another method given other possibilities such as selected air interface being an UMTS air interface, the first air interface format being HSDPA, the alternative air interface being WLAN and the second air interface format being WLAN frames.

Regarding **claim 14**, Wood and Hsu et al. further teaches the node changing the selected air interface selected on the fly from the provided sub-set of air interfaces (Wood, col. 3, line 34 to 59). However, Wood and Hsu et al. does not expressly teach wherein said changing further comprises remapping data of the user equipment from a current physical layer to a different physical layer. Kallio teaches seamless mobility and WLAN network and the mobile station serves as the user's interface with both network while roaming between the two network (paragraph [0023]-[0024], [0030]-[0033]); since the two network use different protocol for data transmission, remapping data of the user equipment from a current physical layer to a different physical layer is a "must do" step to comply with the second network protocol in which the mobile is roamed in at the moment, therefore, it is inherent to remapping data of the user equipment from the current physical layer to a different physical layer when the mobile roaming from GSM network to a WLAN network.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas T. La whose telephone number is (571)-272-8075. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nicholas La
06/18/2006



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